

ABSTRACT

This invention relates to a microwave tube (3) for generation of an electromagnetic wave with frequency  $F$ , the tube comprising mechanical means for varying the frequency  $F$  composed of a set of rings (A, B, C, D) defining a periodic structure inside the tube and mechanical means (4, 5, 2, G) for displacing rings with respect to each other while maintaining a periodicity for periodic structure during displacement of the rings.